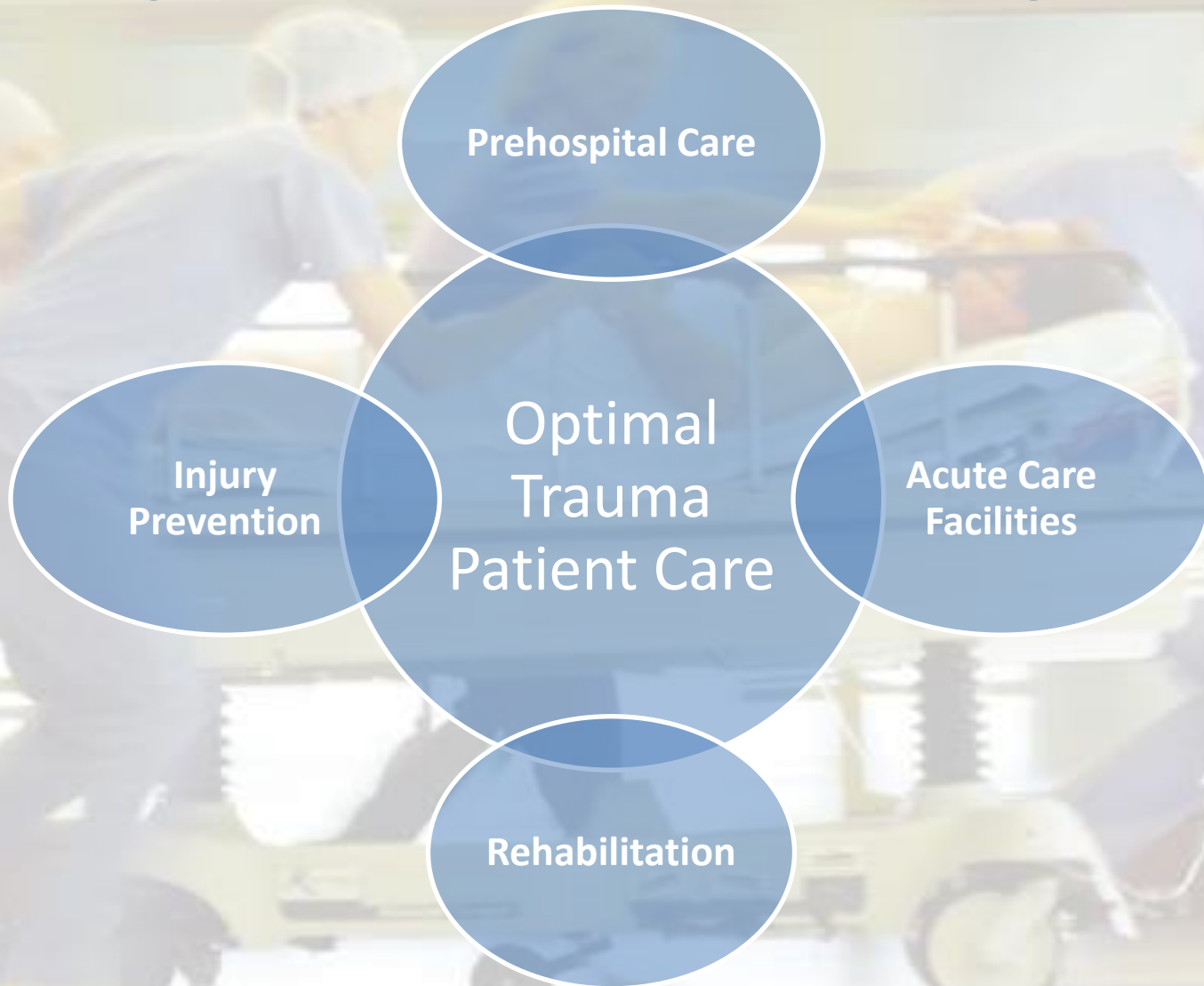


A blurred background image showing medical staff in an operating room. Several people in blue scrubs and surgical masks are visible, working around a patient on a gurney. The scene is brightly lit, typical of a hospital operating room.

Trauma Performance Improvement Documentation

MT Trauma Coordinator Meeting
February 9, 2009

Components of a Trauma System



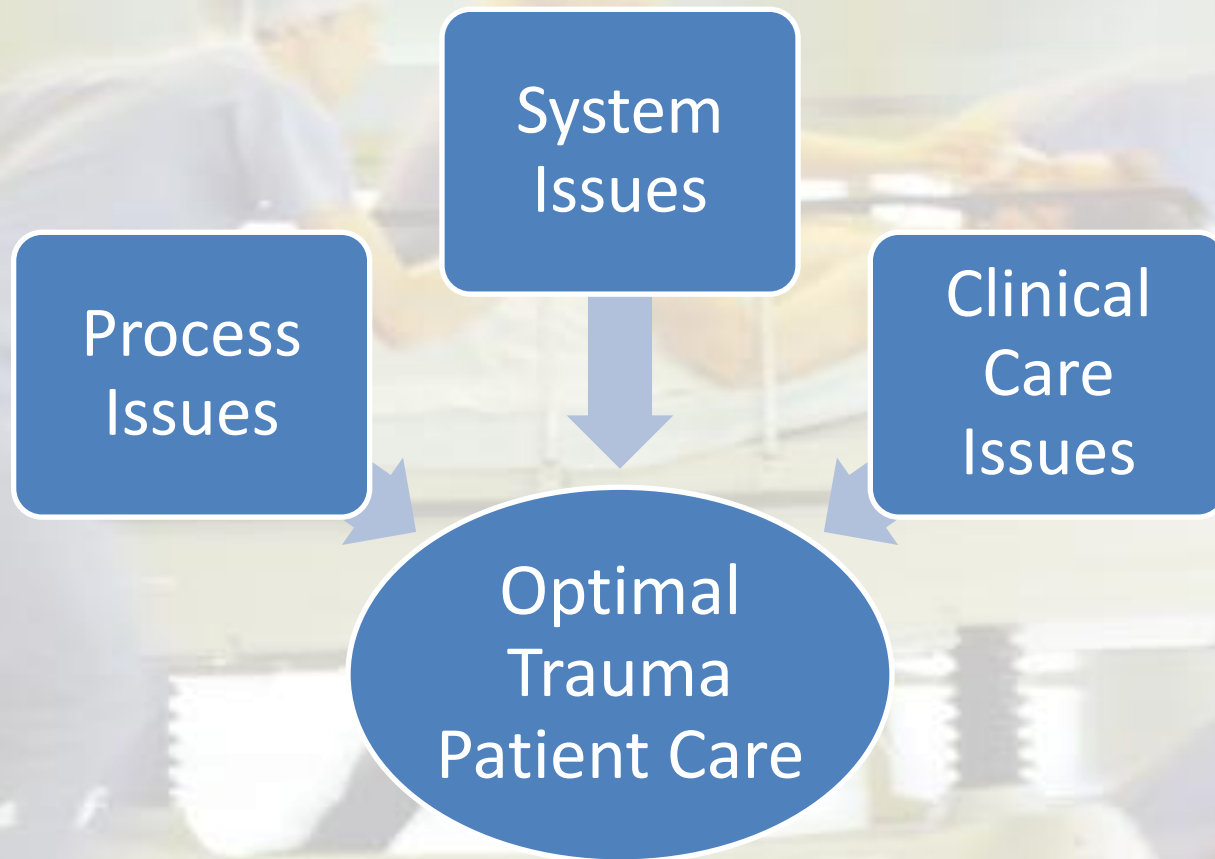
Trauma Performance Improvement

- Trauma Center Performance Improvement is a **key component** of trauma care in the Montana Trauma System
- Developing a trauma performance improvement program should:
 - **Contribute to patient care**
 - **Be sustainable**
 - **Not overwhelm staff** who have many other demands on their time

Trauma Facility Designation

- Key requirement for **trauma designation** in Montana is an ongoing PI program that covers trauma care provided by EMS and the facility
- The **challenge** is to develop a program that is not just a paper exercise but provides a forum for review and education that leads to improved patient care
- There are many ways to meet this requirement, **here is a process** that may work for your facility

Components of Trauma Performance Improvement



Methods of Identifying PI Issues

- **Staff reporting** of system, process, & clinical care quality issues
- **Trauma deaths** are automatic reviews
- Establish & monitor **quality indicators** for all trauma patients
- Periodic **focused reviews**
 - Specific complications, documentation, adherence to care guidelines
- **Outside agency** PI process review

Feedback from Regional Trauma Centers

- **Summary** of injuries identified and care provided
- **Performance issues** might include:
 - Need for chest tube at receiving facility
 - Need for intubation
 - Inappropriate splinting or cervical spine stabilization
- These are filters that flag cases for review, **not a judgment of care**
- They identify cases for closer review only and are **meant to be helpful**

PI Review Process



Primary Review

Secondary Review

Tertiary Review

Primary Review

- Concurrent / Retrospective **issue identification**
- Trauma Coordinator **validation** of issue
- Immediate **resolution** and feedback
- **Documented** in PI process
- **Maybe closed** at this level

Secondary Review

- **Trauma Medical Director & Trauma Coordinator**
- **Judgment** leads to initial action plan
- **Investigation** of issue
- Issue **may be closed** at this level
- Refer to **Multidisciplinary Trauma Committee**
- Refer to **Peer Review**
- **Document** in PI process

Tertiary Review

- **Committee Review**

- Multidisciplinary Trauma Committee
- Medical Peer Review
- Emergency Department Committee
- Regional (RTAC) and Systems (STCC) PI

Multidisciplinary Trauma Committee

- Trauma program **operational issues**
- Meet monthly/quarterly to review **system & process PI**
- **Representatives** from all phases of care with attendance recorded
 - Medical providers, EMS, nurses, ancillary staff & administration

Medical Peer Review

- **Documentation** to be written carefully but include candid discussion
- Review of **deaths, complications** and **clinical care issues** of seriously injured patients either admitted to the facility or transferred to a higher level of care
- **Participation** of medical providers involved in trauma care
- **Trauma Coordinator** must attend

Documentation

- **Performance improvement documentation** includes:
 - Patient Care Summary
 - Identified Issues
 - Level of Review
 - Conclusions
 - Corrective Action Plan
 - Implementation
 - Evaluation Method for Loop Closure

Trauma Indicators	YES	NO	NA	Comments	
EMS Scene Time				Arrival:	Departure:
EMS Trip Sheet on Chart					
Trauma Team Activation:				Time:	
Initiated by EMS					
*Overtriage OR Undertriage				Describe:	
Patient Arrival to ED				Time:	
Timely Notification of Physician / Surgeon				Time:	
Timely Arrival of Physician / Surgeon				Time:	
Timely Airway Management / Endotracheal Intubation for:				Time:	
Respiratory Insufficiency (Respiratory Rate <10 or >29)				Describe:	
Decreased LOC (GCS \leq 8)				GCS Total: Eye: Verbal: Motor:	

*Overtriage – Activation with discharge home from ED

Undertriage - No activation for patient transferred to higher level of care, ICU/OR, or died **OR** no activation when patient met criteria

Trauma Indicators	YES	NO	NA	Comments
Timely Chest Tube Placement for Hemothorax / Pneumothorax				Time: Tube Size / Location:
Patient with Hypotension (adult BP < 90) given Fluid Resuscitation				IV Number / Size: List Fluids / Blood Totals:
Temperature Documented				Temperature: Route:
*Hypothermia Identified:				Time:
Warming Measures				List:
Patient Discharge from ED:				Time:
Transfer > 2 hours				Method: Destination:
Surgery/ICU Admit/Acute Care Admit/Home/Death				
Complete ED Nursing Documentation				
Trauma Flowsheet Utilized				
*Hypothermia – Core body temperature below 96 degrees F (35 degrees C)				

Trauma Performance Improvement Documentation

PI Issue	Level of Review Date	Conclusion	Action Plan	Implementation	Evaluation



Trauma Case Review for Performance Improvement

PRACTICE SESSION

EMS

- Page out for MVC
- Dispatched 1100, left 1115, at scene 1130, left scene 1145, arrived at facility 1200
- MIVT radio report to hospital at 1155
 - **M**- 65 year old unrestrained male driver in single vehicle rollover with ejection, found 30 feet from vehicle. Patient on Coumadin.
 - **I**- Suspected injuries include TBI & chest injuries
 - **V**- 120/80-120-32, O2 sat 90%, GCS 10
 - **T**- Oxygen via NRB at 15L/min with spinal stabilization

Emergency Department

- PA-C on call notified at 1157, patient arrived at 1200, PA-C arrived at 1205
- Initial vital signs 118/82-120-32, O2 sat 88% on NRB 15 L/min, temp 98.9 R, GCS 10 (2-4-4), VS & NS repeated q 15 min on trauma flowsheet
- Endotracheal intubation with RSI at 1215 verified by portable CXR at 1225 which also revealed multiple right fx ribs with moderate sized pneumothorax, pelvis and lateral c-spine films showed no injuries, vital signs 104/84-130-30, GCS 10
- Two 18 gauge IVs placed at 1210 and 1227 with LR hung
- 28F chest tube placed on right side at 1325
- Vital signs at 1400 were 128/82-88-24, 2 liters LR infused
- Flight team leaves with pt. at 1400 after being notified at 1220

PI Patient Summary

- *This is the case of a 65 year old male who was the unrestrained driver in a rollover with ejection 30 feet from vehicle. Current meds include Coumadin.*
- *Injuries include a TBI with GCS of 10 and multiple right rib fractures with pneumothorax.*
- *The patient remained spinal stabilized with back raft, was intubated and right chest tube placed. He was transferred by flight to DEF two hours after arrival.*

Trauma Indicators	YES	NO	NA	Comments
EMS Scene Time	X			Arrival: 1130 Departure: 1145 Total: 15 min
EMS Trip Sheet on Chart	X			
Trauma Team Activation:		X		Time: Hospital called at 1155, 5 min PTA
Initiated by EMS		X		
*Overtriage OR <u>Undertriage</u>	X			Describe: TBI with GCS of 10, chest injuries, RR 32 with sat 90% on NRB 15 L/min
Patient Arrival to ED				Time: 1200
Timely Notification of Physician / Surgeon		X		Time: 1157
Timely Arrival of Physician / Surgeon	X			Time: 1205
Timely Airway Management / Endotracheal Intubation for:	X			Time: Intubated at 1210, 10 min after pt arrival & 5 min after provider arrival
Respiratory Insufficiency (Respiratory Rate <10 or >29)	X			Describe: RR 32 with O2 sat of 86% on NRB
Decreased LOC (GCS ≤ 8)			X	GCS Total: 10 Eye: 2 Verbal: 4 Motor: 4

*Overtriage – Activation with discharge home from ED

Undertriage - No activation for patient transferred to higher level of care, ICU/OR, or died **OR** no activation when patient met criteria

Trauma Indicators	YES	NO	NA	Comments
Timely Chest Tube Placement for Hemothorax / Pneumothorax		X		Time: 1325 after identified at 1225 Tube Size / Location: Small 28F on right
Patient with Hypotension (adult BP < 90) given Fluid Resuscitation			X	IV Number / Size: Two 18g at 1210 & 1227 List Fluids / Blood Totals: 2 liters of LR, BP OK
Temperature Documented	X			Temperature: 98.9 Route: R
*Hypothermia Identified:			X	Time:
Warming Measures			X	List:
Patient Discharge from ED:	X			Time: 1400 (2 hours after admission)
Transfer > 2 hours	X			Method: ABC flight team Destination: DEF Regional Trauma Center
Surgery/ICU Admit/Acute Care Admit/Home/Death			X	
Complete ED Nursing Documentation	X			Good nursing documentation
Trauma Flowsheet Utilized	X			
*Hypothermia – Core body temperature below 96 degrees F (35 degrees C)				

Trauma Performance Improvement Documentation

PI Issue	Level of Review Date	Conclusion	Action Plan	Implementation	Evaluation
<i>Trauma team not activated Undertriage</i>					
<i>Provider notified late</i>					
<i>Chest tube placed 1 hr after pneumothorax identified</i>					

Trauma Receiving Facilities

- At the majority of our trauma facilities, the **primary focus** is:
 - **Stabilization** of seriously injured patients
 - Movement of these patients through the system **to definitive care**
- Monitoring the performance of care can identify areas for more **effective use of resources** and **care expedited**
- PI can help identify areas for improvement through **education** or **protocol development**

Clinical Protocols

- Clinical protocols are a by product of productive performance improvement
 - **Decreases variation and errors**
 - **Increases positive patient outcomes**
- Evidence-based medicine has become the **standard of care**
- Clinical protocols ensure that all the care that is given is **contemporary and consistent**

Performance Improvement aids...

- Improving patient care through:
 - Obtaining resources for the facility
 - Guiding outreach efforts
 - Guiding prevention efforts
 - Development of the **strategic plan**
 - Assessment of **provider competency**
 - Shows the effectiveness of **clinical protocols**

